

**REMARKS**

Upon entry of the amendments in this paper, claims 1, 2, and 4-15 will be pending in the above-identified application. Claim 15 is herein added. No new matter is entered. It is respectfully submitted that this paper is fully responsive to the Office action mailed on July 21, 2009.

**Allowable Subject Matter**

Applicants thank the examiner for considering claim 14 to be allowable.

**Claim Rejections - 35 U.S.C. §103(a)**

Claims 1, 2, 5, 6 and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,247,223 to *Mori* in view of U.S. Patent No. 6,410,941 to *Taylor*. Claims 1-2, 4 and 9-10 also stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,003,360 to *Okada* in view of *Mori*.

**Independent Claim 1:**

Independent claim 1 recites in part:

the fine vacuum tube element and the other electronic elements transmit signals to and from each other;

Applicants respectfully submit that the above recited feature is not disclosed or rendered obvious by the cited references. That is, as recited in *Mori*, a “quantum interference

semiconductor device” is shown. However, *Mori* does not disclose the above recited element, wherein a fine vacuum tube transmits signals to other electronic elements, also contained in the integrated circuit.

With respect to *Okada*, it also does not disclose or render obvious the above recited feature. That is, *Okada* discusses a “semiconductor functional element,” but not one which is located on an integrated circuit, as recited in claim 1. Furthermore, *Okada* does not disclose transmitting any signals to and from the alleged vacuum tube element to another electronic circuit.

As such, applicants respectfully ask that the examiner withdraw the rejection of claim 1 and place the application in condition for allowance.

Claims 7-8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Mori* in view of *Taylor* as applied to claim 1 above, and further in view of U.S. Patent No. 3,636,399 to *Eastman*.

Claims 12-13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Mori* in view of *Taylor* as applied to claim 1 above, and further in view of U.S. Patent No. 5,981,297 to *Baseit*.

As each of the dependent claims depends from independent claim 1, the arguments and rationale as presented above also applies to the dependent claims.

New Claim 15:

Applicants have added new claim 15. Applicants respectfully submit that the features of independent claim 15 are not disclosed or rendered obvious by any of the cited references. As such, applicants ask that the examiner allow independent claim 15.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

Application No. 10/767,167  
Art Unit: 2893

Amendment under 37 C.F.R. §1.114  
Attorney Docket No. 042054

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,  
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